



The Chemical Company

MASTERSEAL[®] 360

Silane based (100%) hydrophobic impregnant

DESCRIPTION

MASTERSEAL 360 is a low viscosity clear liquid, based on a selected high purity undiluted isobutyltriethoxy-silane. This silane has a very low molecular size which ensures effective impregnation of concrete and masonry surfaces through deep (>3mm) penetration into the pore structure. The **MASTERSEAL 360** reacts with moisture (humidity) and forms a permanently bonded hydrophobic lining on the pore-walls of the substrate.

The treated substrates are therefore highly hydrophobic and will prevent ingress of water and water borne aggressive agents such as chlorides, with significant reduction in freeze thaw damage while retaining original appearance.

The substantial reduction in water absorption of the treated substrates also assists in the thermal insulation characteristics.

RECOMMENDED FOR

MASTERSEAL 360 is recommended for application to most of the cementitious, masonry and mineral substrates above ground, not subject to hydrostatic pressure. Applications include treating the surfaces of :

- Bridge decks, abutments, piers, soffits, etc
- Beams, columns and walls of buildings
- Exposed brick structures
- Car parks
- Trafficable surfaces
- Marine structures
- Marble and sandstone facades

FEATURES AND BENEFITS

- **Effective water repellence**
- **Minimises surface efflorescence**
- **Non toxic vapours**
- **Highly penetrative**
- **Environmentally friendly**
- **Crack bridging**

PROPERTIES

Supply form	: Clear liquid
Specific gravity	: 0.88
Active Constituents	: 98 - 100%
Refractive Index	: 1.400 ±0.005 @ 25°C

PERFORMANCE DATA

Depth of penetration

This is a function of method of application, the nature and quality of substrate, its residual moisture content, and the ambient conditions during application.

Typical test values

Temperature	Relative humidity	Depth of penetration
24°C	13%	6mm
	52%	5mm
	79%	5mm
40°C	13%	6mm
	52%	5mm
	79%	8mm

(Note: Experience has shown that a depth of penetration of >3mm gives required long term protection to concrete.). **MASTERSEAL 360** complies with British Highway specification BD43/90.

APPLICATION

Surface Preparation - Correct substrate preparation is critical for optimum performance. For best results, concrete should be fully cured and at least 28 days old. However, **MASTERSEAL 360** may be applied as early as 7 days after placement – site trials may be required to ensure adequate depth of penetration is achieved.

Surfaces should be clean, and free from loose particles, oil, grease, or any other contaminants. Surface must be ice and frost-free. Repair defective joints prior to application. Cracks exceeding 0.25mm must be treated prior to application.

Mask and protect all areas not to be treated including glass, plants, asphalt-based materials (eg roofing, joint sealants) etc., and any other material that should not be exposed to solvents.

A test application is recommended on each surface or masonry material to be treated to ensure compatibility and desired water repellent effect and measure depth of penetration.

Placing - **MASTERSEAL 360** may be applied to damp surfaces although dry surfaces are preferred for optimum penetration of the substrate. **MASTERSEAL 360** can be applied to slightly damp surfaces, but not to standing water. Surface is sufficiently dry if the material is evident on the surface when applied.

Do not apply if surface temperature is less than 5°C or greater than 35°C. Do not apply at high ambient temperatures (>30°C) in direct sunlight – shading may be required if excessive temperatures are expected.

Use **MASTERSEAL 360** as supplied without dilution. Apply **MASTERSEAL 360** in two coats with about two hours interval between coats when applied at 25°C and 50% relative humidity. If applied at lower temperatures or humidity, allow longer between coats.

Avoid application on a windy or a rainy day; do not apply if rain is expected within two hours of application. If applying after rain, commence after at least a couple of hours of clear sunshine.



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For best results, on vertical surfaces apply a flood coat of **MASTERSEAL 360** from the bottom up by a low pressure airless spray equipment (Knapsack sprayer), so as to produce 150-200mm run off on the surface below the contact point of the spray pattern.

It can also be applied using a wide short nap roller or brush, in which case, it should be applied repeatedly until the surface remains moist for a few seconds.

On horizontal surfaces apply sufficient material so that it stands for a few seconds before penetration.

If heavy rain is imminent, freshly coated areas should be covered.

Depth of penetration of **MASTERSEAL 360** can be tested by removing cores (minimum depth 50mm; minimum diameter 50mm) three days after treatment and fully wetting the core in water.

EQUIPMENT

Low pressure sprayer (10 psi or 70 kPa), short nap wide roller or brush. Spraying equipment should ideally be fitted with solvent resistant hoses and gaskets.

CLEANING

Clean tools and equipment using **THINNER No. 1**.

ESTIMATING DATA

0.13 - 0.26kg/m² (150-300mL/m²) per coat depending on porosity of substrate. Consumption can increase while treating exposed structures, caused by loss due to wind.

PACKAGING

MASTERSEAL 360 is available in 20L pails and 205L drums.

SHELF LIFE

MASTERSEAL 360 can be stored in original unopened containers for 12 months.

PRECAUTIONS

READ ALL SAFETY DIRECTIONS AND WARNINGS ON PACKAGING BEFORE USE. REFER TO MATERIAL SAFETY DATA SHEET FOR HANDLING PROCEDURES.

Health: MASTERSEAL 360 contains certain chemicals which can cause skin irritation if exposed.

Wear gloves, masks and suitable breathing equipment while handling the product. Wash thoroughly after handling.

Should skin contact occur, wash immediately with plenty of soap and water or an effective hand cleaner.

In case of accidental eye contact, wash immediately with copious quantity of water and seek medical help.

If ingested, do not induce vomiting. Consult a doctor immediately.

The vapours of solvents used for cleaning can be irritating. It is therefore recommended that cleaning is done in well ventilated areas.

Fire: MASTERSEAL 360 is flammable. Avoid exposure to naked flame, sparks and electrical equipment. Do not smoke while handling the product.

Flash point : 63°C

AMs360/9/1111

STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this **BASF** publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

NOTE

Field service where provided does not constitute supervisory responsibility. Suggestions made by **BASF** either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not **BASF**, are responsible for carrying out procedures appropriate to a specific application.

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